



PATENT SPECIFICATION

195,795

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Complete Left: Oct. 6, 1922.

Complete Accepted: April 12, 1923.

PROVISIONAL SPECIFICATION.

Improvements relating to Tripod and like Stands.

I, SIDNEY HAROLD OLDFIELD, of Warwick Street, Birmingham, a British subject, do hereby declare the nature of this invention to be as follows:—

5 The present invention has relation to tripods and like stands, particularly those employed for supporting cameras, and the invention has for its object to provide an improved platform at the top of the stand whereby the camera attached to such platform can be swung through a circle on the platform, and the latter quickly and efficiently tightened to fit the camera when the desired setting has been obtained. The invention further comprehends tightening provision for the telescopic legs of the tripod, whereby when such legs have been extended to the desired length they may be readily 10 tightened by hand and prevented from inadvertent contraction.

According to the present invention, the top plate or part of the tripod to which the telescopic legs are pivotally connected, is provided with a part or parts 15 adapted to be contracted by an encircling manually operable annulus onto a small platform capable of rotation upon the said top plate or part, and which small platform is adapted to carry the camera. Further, in the present invention the upper tube of each leg which is pivoted to the top plate or part of the tripod is 20 screw threaded at its lower extremity and is of split formation, adapted to be contracted on to the next inner tube by an internally screw threaded ring operating on such screw threaded part of the leg.

In a convenient embodiment of the 25 present invention, the top plate or part has pivotally connected thereto upon its underside the three legs. This top plate or part is provided with two semi-circular walls, the extremities of which are disposed short distance apart, and these walls together with the top plate or part vir-

tually constitute a shallow cup-shaped member adapted to receive a disc like platform conveniently hollow on its underside for the reception of the nut 30 which attaches the top plate or part to the legs. The two semi-circular walls are slit adjacent the top plate for the major part of their length, so that they are of a spring character, and at their extremities said walls converge to a thin point or edge. The disc like platform is serrated around its periphery, and centrally and annularly grooved for the 35 reception of small pins or pegs mounted in the semi-circular walls. These pegs prevent the complete separation of the small platform but permit of its rotation. A manually operable annulus is placed 40 around the two semi-circular walls and is provided at diametrically opposed points with inwardly projecting inclined depressions adapted to be normally accommodated between the extremities of the semi-circular walls aforementioned. The 45 platform is provided centrally with a screwed shank and a sheet metal disc is placed over said shank and is fastened to the platform by means of small set screws. This sheet metal disc prevents the removal of the annulus aforementioned and constitutes the direct support 50 for the camera which is screwed on the projecting stud aforementioned. In operation it will be seen that when the stand is in use, and the legs extended the camera can be swung through a circle the small platform and sheet metal disc moving with same and when the desired setting of the camera has been obtained it is only necessary to rotate the annulus a 55 fraction of a revolution which causes the depressions in the annulus to force the semi-circular walls aforementioned radially inwardly to grip the small platform. The reverse movement of the 60 annulus will readily release the platform.

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Means are provided for tightening the legs and preventing their inadvertent contraction when the desired setting of said legs has been obtained. To this end 5 the lower extremity of the tube attached to the top plate or part is externally screw threaded, and is longitudinally split or cut at a number of points around its periphery. The end of such tube is in 10 the form of a small inclined annular face. The tightening ring or annulus is internally screw threaded to co-operate with the screw thread on the tube and is provided internally with an inclined face 15 adapted to co-operate with the inclined face on the extremity of the tube aforementioned. The ring involves two internal diameters, one of which corresponds to the screw threaded part of the 20 tube attached to the top plate or part, the

other diameter corresponds to the inner tube, which slides in such tube directly carried by the top plate or part. In operation, it will be seen that the inner tube is slid in relation to the outer until the desired adjustment has been obtained by tightening the ring, the split parts of the upper tube are adapted to be contracted on to the inner tube to thereby very efficiently lock the parts in relation to one another. Reverse movement of the ring will readily free the parts for the collapsing operation.

Dated this 18th day of January, 1922.

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Patent Agents,

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COMPLETE SPECIFICATION.

Improvements relating to Tripod and like Stands.

40 I, SIDNEY HAROLD OLDFIELD, of Warwick Street, Birmingham, a British subject, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

The present invention has relation to tripods and like stands, particularly those employed for supporting cameras, and the invention has for its object to provide improved pivot mechanism at the top of the stand whereby the camera can be swung through a circle and quickly and efficiently fixed when the desired setting has been obtained. The invention further comprehends tightening provision for the telescopic legs of the tripod, whereby when such legs have been extended to the desired length they may be readily tightened by hand and prevented from inadvertent contraction.

The present invention comprehends a tripod or like stand in which a top plate or platform adapted to support a camera or the like is rotatably mounted within a cup-shaped member the wall of which involves spring tongues of tapering or wedge formation adapted to be actuated by projections on the interior of the annulus encircling such cup-shaped member.

Further, in the present invention the upper tube of each leg pivoted to the top plate or part of the tripod, is screw threaded at its lower extremity and is of split formation, adapted to be contracted on to the next inner tube by an internally

screw threaded ring operating on such screw threaded part of the leg.

In order that this invention may be clearly understood and readily carried into practice, reference may be had to the appended explanatory sheet of drawings, upon which:—

Figure 1 is an elevation of a tripod in the contracted condition constructed according to the present invention.

Figure 2 is a vertical section through the tripod shewn in Figure 1.

Figures 3 and 4 are transverse sections on line *a a* of Figure 2 illustrating the clutch in its free and engaged conditions respectively.

Figure 5 illustrates in vertical section the tightening provision for the legs.

In a convenient embodiment of the present invention, the top plate or part 1 has pivotally connected thereto upon its underside the three legs 2. This top plate or part is provided with two semi-circular walls 3 see particularly Figures 3 and 4, the extremities of which are disposed a short distance apart, and these walls together with the top plate or part virtually constitute a shallow cup-shaped member adapted to receive a disc like platform 4 conveniently hollow on its underside for the reception of the screws 5 or nut which attaches the top plate or part 1 to the legs 2. The two semi-circular walls 3 are slit at 6 adjacent the top plate 4 for the major part of their length, so that they are of a spring character, and at their extremities said walls converge to a thin point or edge as shewn

in the Figures 3 and 4. The disc like platform 4 is serrated around its periphery, and centrally annularly grooved at 7 for the reception of the small pins 5 or pegs 8 mounted in the semi-circular walls 3. These pegs 8 prevent the complete separation of the small platform 4 but permit of its rotation. A manually operable annulus 9 is placed around the two semi-circular walls 3 and is provided at diametrically opposed points with inwardly projecting inclined depressions 10 adapted to be normally accommodated between the extremities of the semi-circular walls 3 aforementioned as shewn in Figure 3. The platform 4 is provided centrally with a screwed shank 11 and a sheet metal disc 12 is placed over said shank and is fastened to the platform by means of small set screws 13. This sheet metal disc prevents the removal of the annulus 9 aforementioned and constitutes the direct support for the camera which is screwed on the projecting stand 11.

When the stand is in use, and the legs extended the camera can be swung through a circle the small platform 4 and sheet metal disc 12 moving with same and when the desired setting of the camera has been obtained it is only necessary to rotate the annulus 9 a fraction of a revolution which causes the depressions 10 to force the semi-circular walls 3 radially inwardly to grip the small platform 4. The reverse movement of the annulus will readily release the platform. Means are provided for tightening the legs 2 and preventing their inadvertent contraction when the desired setting of said legs has been obtained. To this end the lower extremity of the tube attached to the top plate or part is externally screw threaded at 14 and is longitudinally split or cut at a number of points 15 around its periphery. The end of such tube is in the form of a small inclined annular face 16. A tightening ring or annulus 17 is internally screw threaded to cooperate with the screw thread on the tube and is provided internally with an inclined face 18 adapted to cooperate with the inclined face on the extremity of the tube 2 aforementioned. The ring involves two internal diameters, one of which corresponds to the screw threaded part of the tube attached to the top plate or part, the other diameter corresponds to the inner tube 19, which slides in such tube

directly carried by the top plate or part. In operation, it will be seen that the inner tube 19 is slid in relation to the outer until the desired adjustment has been obtained, by tightening the ring 17, the split parts of the upper tube 2 are adapted to be contracted on to the inner tube 19 to thereby very efficiently lock the parts in relation to one another. Reverse movement of the ring will readily free the parts for the collapsing operation.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. A tripod or like stand, in which a top plate or platform adapted to support a camera or the like is rotatably mounted within a cup-shaped member the wall of which involves spring tongues of tapering or wedge formation adapted to be actuated by projections on the interior of the annulus encircling such cup-shaped member, substantially as and for the purpose set forth.

2. A tripod or like stand as set forth in the preceding claim in which the platform is prevented from separation from the cup-shaped member by means of projections on the annular wall thereof engaging an annular or other groove in the platform.

3. A tripod or like stand as set forth in Claims 1 or 2 in which the platform is provided with a screwed shank and metal disc adapted to form a seating for the camera or other object and prevent separation of the encircling annulus.

4. A tripod or like stand as set forth in any of the foregoing claims in which the platform is externally serrated or similarly treated to enable an efficient grip of same to be obtained by the wall of the cup shaped member.

5. A tripod or like stand as set forth in any of the foregoing claims having means for tightening the legs, substantially as described and illustrated with reference to Figure 5 of the drawings.

6. Tripod and like stands, substantially as herein set forth and illustrated.

Dated this 5th day of October, 1922.
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[This Drawing is a reproduction of the Original on a reduced scale.]

Fig. 1.

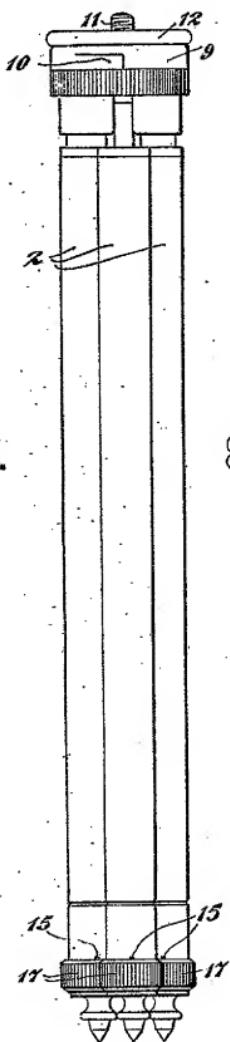
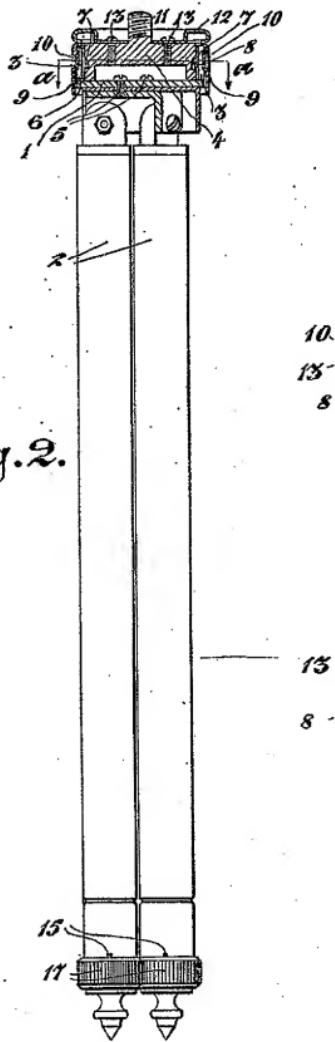


Fig. 2.



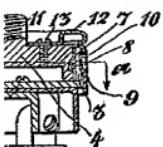


Fig. 3.

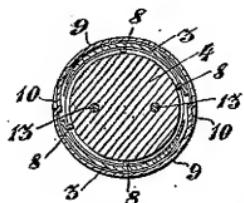


Fig. 4.

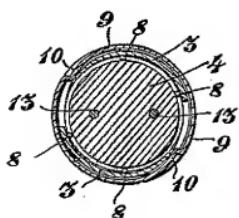
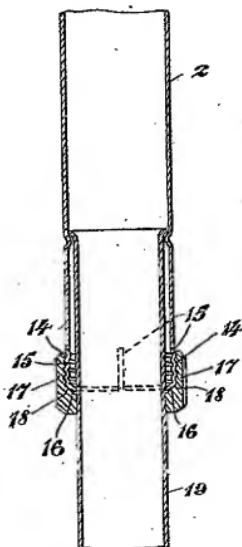


Fig. 5



[This Drawing is a representation of the Original and reduced scale.]

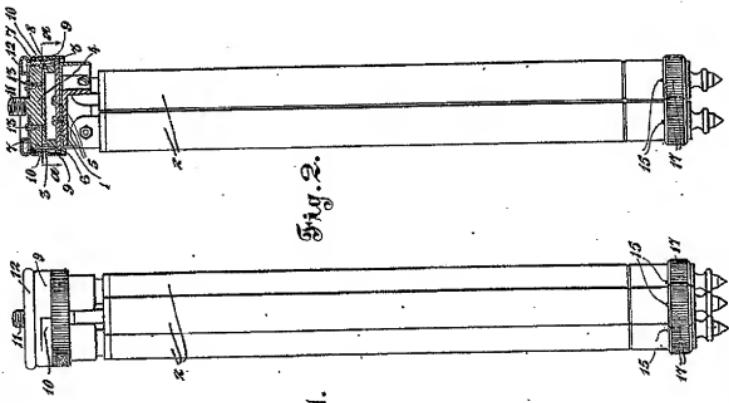


Fig. 1.

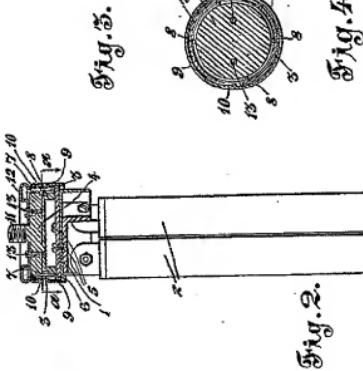


Fig. 2.

Fig. 5.

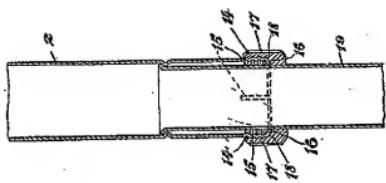


Fig. 5.

Fig. 4.

